DOLGOPOLOV, R.S.

Discussion of the article "Planning and business accounting in signaling and communication districts." Avtom., telem. i sviaz' 8 no.8:36-37 Ag '64. (MIRA 17:10)

1. Zamestitel' nachal'nika Dzhankoyskoy distantsii signalizatsii i svyazi Pridneprovskoy dorogi.

OFENGENDEN, N.Ye., kand.tekhn.nauk; DOLGOPOLOV, V.A., inzh.

High pressure 10N8x4A type pump for operations in the closed wash water circuit in hydraulic mining. Ugol' 37 no.1:27-28 Ja '62. (MIRA 15:2)

1. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Hydraulic mining)
(Pumping machinery)

TSELIKOV, V.K.; OFENGENDEN, N.Ye.; DOLGOPOLOV, V.A.

Increasing the wear resistance of coal suction dredger parts.
Ugol' 38 no.1:25-28 Ja '63. (MIRA 18:3)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki (for TSelikov). 2. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Ofengenden, Dolgopolov).

LEPKSKIY, Mark Moiseyevich; DOLGOPOLOV, V.G., red.; KOVALENKO, V.L., tekhn. red.

[Nomograms for the calculation of triangles] Nomogrammy dlia resheniia treugol'nikov; posobie dlia uchitelei. Moskva, Uchpedgiz, 1961. 45 p. (MIRA 15:5)
(Nomography (Mathematics))

SERPINSKIY, Vatslav [Sierpinski, Waclaw]; GOLUBEV, V.A. [translator]; DOLGOPOLOV, V.G., red.; MAKAROVA, N.F., tekhn.red.

[One hundred simple and yet difficult arithmetical problems; on the border between geometry and arithmetic (textbook for teachers)] Sto prostykh, no odnovremenno i trudnykh voprosov arifmetiki; na granitse geometrii i arifmetiki (posobie dlia uchitelei). Predisl. i primechaniia V.A.Golubeva. Moskva. Uchpedgiz, 1961. 74 p. Translated from the Polish. (MIRA 15:5)

1. Vitse-prezident Pol'skoy Akademii nauk (for Serpinskiy). (Arithmetic—Problems, exercises, etc.)

DANILOVA, Yevgeniya Feodos'yevna; DOLGOPOLOV, V.G., red.;
DRANNIKOVA, M.S., tekhn. red.

[How to help students find a way to solve geometrical problems]Kak pomoch' uchashchimsia nakhodit' put' k resheniiu geometricheskikh zadach. 2. ispr. i dop. izd. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1961. 141 p. (MIRA 15:2)

(Geometry—Problems, exercises, etc.)

YEGOROVA, Irina Aleksandrovna; VULIKH, B.Z., prof., red.; DOLGOPOLOV, V.G., red.

[Problems and exercises in mathematical analysis] Zadachnik-praktikum po matematicheskomu analizu. Moskva, Uchpedgiz. Pt.3. [Functions of several variables] Funktsii neskol'kikh peremennykh. Izd.2. 1962. 102 p. (MIRA 17:8)

TULINOV, Boris Alekseyevich; CHEKMAREV, Yakov Fedorovich; DOLGOPOLOV, V.G., red.; KOVALENKO, V.L., tekhn.red.

[Arithmetic for pedagogical schools] Arifmetika; dlia pedagogicheskikh uchilishch. Izd.6. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, 1961. 295 p. (MIRA 14:6)
(Arithmetic)

BAKHVALOV, Sergey Vladimirovich; BABUSHKIN, Lev Ivanovich; IVANITSKAYA, Valentina Pavlovna; DOLGOPALOV, V.G., red.; SMIRNOVA, M.I., tekhn. red.

[Analytic geometry] Analiticheskaia geometriia; uchebnik dlia pedagogicheskikh institutov. Izd.2., perer. Moskva, Uchpedgiz, 1962. 367 p. (MIRA 16:10)
(Geometry, Analytic)

VLADIMIRSKIY, Grigoriy Alekseyevich; DOLGOPOLOV, V.G., red.; KARPOVA, T.V., tekhn. red.

[Stereoscopic geometrical drawings] Stereoskopicheskie chertezhi po geometrii; al'bom. Moskva, Uchpedgiz, 1963. 174 p. (MIRA 16:6)
(Geometrical drawing)

SHKOL'NIK, Adol'f Grigor'yevich; DOLGOPOLOV, V.G., red.; KARPOVA, T.V., tekhn. red.

[Differential equations] Differentsial'nye uravneniia; uchebnoe posobie dlia fiziko-matematicheskikh fakul'tetov pedagogicheskikh institutov. Moskva, Uchpedgiz, 1963. 197 p. (MIRA 16:9)

(Differential equations)

KOROVKIN, Pavel Petrovich; DOLGOPOLOV, V.G., red.; KOZLOVSKAYA, M.D., tekhn. red.

[Mathematical analysis] Matematicheskii analiz. Moskva, Uchpedgiz. Pt.1. 1963. 399 p. (MIRA 16:12)
(Mathematical analysis)

ANANASYAN, Levon Sergeyevich; VASIL'YEVA, Mayya Vladimirovna, dots.; GUREVICH, Grigoriy Borisovich; IL'IN, Aleksandr Sergeyevich; KOZ'MINA, Tat'yana Leonidovna; REDOZUBOVA, Ol'ga Sergeyevna; DOLGOPOLOV, V.G., red.

[Problems in elementary geometry; textbook for pedagogical institutes] Sbornik zadach po elementarnoi geometrii; posobie dlia pedagogicheskikh institutov. Izd.2., perer. Moskva, Prosveshchenie, 1964. 93 p. (MIRA 17:7)

FROLOV, Nikolay Adrianovich; DOLGOPOLOV, V.G., red.

[Course in mathematical analysis; a textbook for pedagogical institutes] Kurs matematicheskogo analiza; posobie dlia pedagogicheskikh institutov. Izd. 2., perer. Moskva, Prosveshchenie. Pt.1. 1964. 383 p. (MIRA 17:5)

PROSKURYAKOV , Igor' Vladimirovich; DOLGOPOLOV, V.G., red.

[Numbers and polynomials] Chisla i mnogochleny. Izd.2.
Moskva, Prosveshchenie, 1965. 283 p. (MIRA 18:4)

BAKHVALOV, Sergey Vladimirovich; BABUSHKIN, Lev Ivanovich; IVANITSKAYA, Valentina Pavlovna; DOLGOPOLOV, V.G., red.

[Analytic geometry; textbook for pedagogical institutes] Analiticheskaia geometriia; uchebnik dlia pedagogicheskikh institutov. Pod red. S.V.Bakhvalova. Izd.3. Moskva, Prosveshchenie, 1965. 367 p. (MIRA 18:12)

PROCESSES AND PROPERTIES INDEX

3

CA

Some problems in fluorescent-lamp development. V. A. Fabrikant, F. A. Butaeva, V. L. Dolgopolov, and ... (Elec.-tech. Inst. of the U.S.S.R.). Bull. acad. sci. U.R.S.S., Sér. phys. 9, 301-8(1945). A summary. According to tests made in 1943-44 the Hg lines 1850 A. and 2537 A. are equally responsible for the excitation of fluorescent material powders. The optimum amt. of fluorescent material is approx. 2 mg./cm.². The brightness of mixt. is given by the formula $(B_a - B_{1a})/(B_{2a} - B_a) = a_1K_1/a_2K_2$, where B_a is the brightness of a layer completely absorbing the ultraviolet radiation a_1 and a_2 the relative parts of the materials in the mixt. and K_1 and K_2 their absorption coeff. in the ultraviolet. This formula has only approximate value. In recent Russian lamps the fluorescent powders are Zn Be silicate (activator Mn) and $MgWO_4$. Spectral distribution curves and colorimetric characteristics are given. S. Pakswer

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1. DOLGOPOLOV, V. I., Ing.; PETROVA, N. O.; POZHALKINA, L. N.

2. USSR (600)

4. Electric Lamps, Incandescent

7. Luminescent lamps with cold cathodes.
Elektrichestvo No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

DOLGOPOLOV, V.I., inzhener; POZHALKINA, L.N., inzhener

New white diffuse reflecting enamels. Svetotekhnika 1 no.3: 7-11 Je'55. (MLRA 8:10)

Illumination engineering

1. Vsesoyuznyy svetotekhnicheskiy institut
(Reflection (Optics)) (Enamel and enameling)

[redacted], V.I., inzhener.

[redacted] work of the Illumination Engineering Materials Laboratory of the All-Union Scientific Research Institute. Svetotekhnika 3 no.8:26 Ag '57. (MIRA 10:8)

1.Nachal'nik laboratorii svetotekhnicheskikh materialov Vsesoyuznogo nauchno-issledovatel'skogo svetotekhnicheskogo instituta. (Lighting)

S/196/61/000/009/013/052
E194/E155

AUTHORS: Dolgopolov, V.I., Dolgopolova, L.N., and Kamayeva, G.F.

TITLE: Fluorescent silicate enamel

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.9, 1961, 12, abstract 9V 94. (Svetotekhnika, no.3, 1961, 18-21)

TEXT: A fluorescent silicate enamel has been developed which has a brightness and duration of after-glow similar to those of the fluorescent plastics now used but which is superior in respect of stability of physical and chemical properties and resistance to moisture and atmosphere. The consumption of fluorescent materials in the silicate fluorescent enamel is half that in plastics. According to preliminary calculations the cost of one m^2 of silicate fluorescent enamel is a fifth of that of fluorescent plastic. The silicate fluorescent enamel can be used for making fluorescent signs.
4 figures, 2 literature references.
[Abstractor's note: Complete translation.]
Card 1/1

S/026/61/000/012/004/004
D221/D304

AUTHORS: Dolgopolov, V. I., and Petrova, N. G.

TITLE: Organic glass for illumination purposes

PERIODICAL: Standartizatsiya, no. 12, 1961, 49-50

TEXT: The new ГОСТ (GOST) 9784-61 for organic glass used for technical illumination is described. It covers the following marks: colorless (СН (SN)), colored (СО (SO)), reinforced by glass fiber, colorless (САН (SAN)), reinforced with glass fibers and colored (САО (SAO)), with inclusion of glass fibers, colorless (СВН (SVN)), and with inclusion of glass fibers, colored (СВО (SVO)). All types will be produced in three classes of heat resistance, and will be designated accordingly. The above GOST envisages six groups of diffusion indices. It is expedient to divide the curves of dispersion into four parts related to four groups of glass. The limit of diffusion and the coefficient of transparence are standardized for five groups of glass of all marks

Card 1/2

Organic glass for ...

and thicknesses, with maximum in group V, as far as the diffusion is concerned. The transparence is in the reverse order. The standard also defines the coefficient of light absorption by indicating minima of permitted transparence and refraction. Only slightly colored glass is covered by the standard. The shade will be decided by the user and maker. The light characteristics of glass must be determined on VNISI special installations. The use of 1.3 mm thick glass will reduce the weight and price, as well as improve the aesthetic qualities of the articles. The relationship between the coefficient of transparence and the thickness of glass is tabulated. The norms foreseen for the physical and mechanical properties of the material are also indicated in a table. It is affirmed that the replacement of silicate glass by organic glass would reduce the weight and costs of supporting structures of illumination devices; the use of reinforced glass could increase the service period of lamps. There are 2 tables.

Card 2/2

DOLGOPOLOV, V.I., inzh.; PETROVA, N.G., inzh.

Concerning the state standard for organic glass used in lighting engineering. Svetotekhnika 7 no.10:20-24 O '61. (MIRA 14:9)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Glass—Standards) (Electric lamps)

DOLGOPOLOV, V.I., inzh.; DOLGOPOLOVA, L.N., inzh.; PETROVA, N.G., inzh.

Principal characteristics of materials used in manufacturing light fixtures. Svetotekhnika 9 no.11:18-22 N '63. (MIRA 16:12)

1. Vsesoyuznyy svetotekhnicheskiy institut.

DOLGOPOLOV, V.I., inzh.; DOLGOPOLOVA, L.N., inzh.; PETROVA, N.G., inzh.; BELOGLOVSKAYA, T.I., inzh.

Electroluminescent mimic flowsheets and signal registers for control boards. Elek. sta. 34 no.7:72-73 Jl '63. (MIRA 16:8)

BOBROV, I.I., inzh.; DOLGOPOLOV, V.M., inzh.; ZISMAN, L.M., inzh.; RAISEVICH, B.I., inzh.; MIKHAYLOV, A.P., inzh.

Recording frequency meter and power register device. Elek.sta. 32 no.9:89-91 S '61. (MIRA 14:10)
(Frequency measurement)
(Electric power plants--Equipment and supplies)

ZISMAN, L.M., inzh.; BOBROV, I.I., inzh.; DOLGOPOLOV, V.M., inzh.; RANSEVICH, B.N., inzh.

Central voltage regulator of a network for group excitation regulation of generators. Elek. sta. 34 no.11:93-94 N '63. (MIRA 17:2)

DOLGOPOLOV, V.M., inzh.; ZISMAN, L.M., inzh.; NEYSHTADT, I.S., inzh.; RANSEVICH, B.N., inzh.; UBIN, V.D., inzh.

Operation of the automatic operator of a multiple-unit hydroelectric power station with long-term frequency deviations from the nominal value. Elek. sta. 35 no.2:35-37 F '64.
(MIRA 17:6)

DOLGOPOLOV, V.M., inzh.; MIKHAYLOV, A.P., inzh.; RANGEVICH, B.N., inzh.

Decreasing of residual voltage in generators. Elek. sta. 36 no.2:78 F '65. (MIRA 18:4)

ACC NR: AP7003535 SOURCE CODE: UR/0386/67/005/001/0017/0020

AUTHOR: Gantmakher, V. F.; Dolgopolov, V. T.

ORG: Institute of Physics Problems, Academy of Sciences SSSR (Institut fizicheskikh problem Akademii nauk SSSR)

TITLE: Excitation of standing sound waves in Bi by an electromagnetic method

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 5, no. 1, 1967, 17-20

TOPIC TAGS: bismuth, sound propagation, low temperature research, surface property, skin effect

ABSTRACT: The authors report here the results of preliminary experiments in which they observed excitation of sound in Bi by an electromagnetic wave incident on its surface. Single-crystal Bi samples in the form of discs were placed inside an inductance coil, with which they were cooled to helium temperatures. The coil together with the sample served as the inductance of the tank circuit of an rf oscillator, which included a blocked semiconductor diode. The dependence of the barrier capacitance of its p-n junction on the blocking voltage made it possible to vary smoothly the oscillation frequency, and also to modulate it sinusoidally at a frequency $\varphi = 19$ cps. The oscillator output was detected and fed to a narrow-band amplifier with synchronous detector, tuned to double the modulation frequency 2φ. As a result, the output signal was proportional to $\partial^2 R/\partial f^2$ (R = real part of Bi sample surface imped-

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ACC NR: AP7003535

ance). The dependence of $\partial^2 R/\partial f^2$ on f was investigated in the interval 1 - 10 MHz. In magnetic fields on the order of 10 - 100 Oe and parallel to the coil axis, a group of equidistant peaks appeared on the $\partial^2 R/\partial f^2$ curves, separated by frequency intervals larger by one order of magnitude than the width of each individual group. The magnitude and direction of the magnetic field affected only the amplitudes of the peaks, the positions of which remained unchanged. Arguments are presented to show that the observed excitation of sound in Bi is due to some specific mechanism, connected with emission of sound as a result of large electron drift velocity. It is concluded, however, that further experiments are needed to clarify the sound-excitation mechanism. The authors thank Academician P. L. Kapitsa for the opportunity to perform the experiments at the Institute of Physics Problems, and Yu. V. Sharvin for interest in the work. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 10Oct66/ ORIG REF: 001/ OTH REF: 003

Card 2/2

86806

S/185/60/005/001/005/018
A151/A029

26.1410 also 2401, 2507

AUTHORS: Dolgopolov, V.V.; Stepanov, K.M.

TITLE: The Damping of Magneto-Hydrodynamic Waves in a Rarefied Plasma.

PERIODICAL: Ukrayins'kyy Fizychnyy Zhurnal, 1960, Vol. 5, No. 1, pp. 59 - 64

TEXT: This article deals with the propagation of magneto-hydrodynamic waves in an unlimited plasma consisting of electrons and ions. The investigation is based on the kinetic theory and allowance is made for the "close" collisions between the particles of the plasma. A description is given of the perturbation of the plasma by a magneto-hydrodynamic wave with a small amplitude. This wave passes through the plasma by small deviations f_α (r,p,t) of the functions of the distribution of electrons and ions along coordinates and pulses. The functions f_α are determined from kinetic equations (1), where the collision integral $\frac{\partial J_\alpha}{\partial p_i}$ was taken in Landau's form (Ref. 5). The self-coordinated electrical field is determined from equation (2). The equations (1), (2) are solved according to Fourier-Laplace's method whereby a dispersion equation is found which connects the complex frequency ω and the wave vector k. The solution of equation (1) for the Fourier-Laplace's components is effected in the form of an expansion in a row

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The Damping of Magneto-Hydrodynamic Waves in a Rarefied Plasma

according to the degrees $\frac{\gamma}{\omega_s}$ (ω is the damping coefficient). In the case of the propagation of waves along the field H_0, the dispersion equation for magneto-hydrodynamic waves has the form (7). In the case $\nu_i = 0$ (ν_i - effective frequency of collisions between ions), the equation (7) coincides with the dispersion equation obtained by Hershman (Ref. 1). At $\nu_i = 0$, (7) yields the dispersion equation, obtained in the work of Ginzburg (Ref. 4). The first item in (7) which determines the damping is conditioned by the collisions of electrons with ions, the second item determining the damping by the ion-ion collisions. It follows from (7), that the ion-ion collisions may be neglected for waves with a high phase speed, when $V_{ph.sp}^2 = V_A^2 \gg \sqrt{\frac{M}{m}}\nu_i^2$. In the case of $V_A^2 \sim \sqrt{\frac{M}{m}}\nu_i^2$ the ion-ion collisions make the same contribution to damping as the ion-electron collisions. In the case of $V_A \sim \nu_i$ (and especially at $V_A \ll \nu_i$), the damping of magneto-hydrodynamic waves is determined only by collisions between ions. For a magneto-hydrodynamic wave propagating perpendicularly to H_0 (this wave is similar to the "quick" magnetosonic wave of magnetic hydrodynamics), the dispersion equation has the form (11). The frequency and damping of the magneto-hydrodynamic wave is determined by the expressions (12) and (13). The first item in (13) is conditioned by electron-ion collisions, the second by the collisions between electrons, the third by the collisions of elec-

The Damping of Magneto-Hydrodynamic Waves in a Rarefied Plasma

trons with ions. It follows from (13) that in the case of $V_\Phi^2 = V_A^2 \gg v_i^2 \frac{\omega_H^e \omega_H^i}{\omega^2}$ the damping of magneto-hydrodynamic waves is determined only by electron-ion collisions (the first item in (13)). In this case, the waves propagating perpendicularly to H_0 become damped approximately in the same way as waves which are propagating along H_0. If, however, $V_A^2 \ll v_i^2 \frac{\omega_H^e \omega_H^i}{\omega^2}$, then the damping of waves is determined by the two last items in (13). In this instance, the waves propagating across the magnetic field are damped more intensely than those propagating along the magnetic field. The calculations made show that the dissipation of the energy of magneto-hydrodynamic waves in a rarefied plasma which appears as the result of the "close" collisions of particles, may prove to be considerably higher than it is indicated by the phenomenological theory (biliquid specimen of the plasma) making allowance only for the electron-ion collisions. There are 5 Soviet references.

ASSOCIATION: Fizyko-tekhnichnyy instytut AN UFSR (Physico-Technical Institute, AS UkrSSR).

SUBMITTED: June 20, 1959

Card 3/3

DOLGOPOLOV, V.V.; STEPANOV, K.N.

Heating of a plasma in the case of magnetoacoustic resonance.
Zhur.tekh.fiz. 32 no.7:798-802 Jl '62. (MIRA 15:8)
(Plasma (Ionized gases)) (Magnetohydrodynamics)

ACCESSION NR: AT4036046 S/2781/63/000/003/0096/0109

AUTHORS: Vasil'yev, M. P.; Grigor'yeva, L. I.; Dolgopolov, V. V.; Smerdov, B. I.; Stepanov, K. N.; Chechkin, V. V.

TITLE: Absorption of high-frequency energy by a plasma near ion cyclotron resonance. I.

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i problemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady* konferentsii, no. 3. Kiev, Izd-vo AN UkrSSR, 1963, 96-109

TOPIC TAGS: cyclotron resonance phenomena, plasma heating, plasma thermal excitation, plasma magnetic field interaction, microwave plasma

ABSTRACT: Cyclotron absorption of electromagnetic waves excited by

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ACCESSION NR: AT4036046

current flowing in a coil surrounding a plasma cylinder are considered. The heating of a plasma by cyclotron excitation of strongly damped (ordinary) and weakly damped (extraordinary) waves is discussed. General expressions are derived for the power absorbed by the plasma (for the energy flux inside the plasma per unit length of the plasma cylinder). Since the general expressions are rather complicated, a few limiting cases are considered, namely when the wave frequency is close to the ion cyclotron frequency, high ion-gas temperature, long-wave oscillations, and short-wave oscillations. The case of a low density plasma is also considered. Other topics touched upon are the influence of collisions on the heating of the plasma, the excitation of weakly damped (extraordinary waves in a plasma cylinder, and the heating of a plasma consisting of a mixture of two species of ions (such as deuterium and tritium. Orig. art. has: 2 figures and 24 formulas.

ASSOCIATION: None

ACCESSION NR: AT4036046

SUBMITTED: 00	DATE ACQ: 21May64	ENCL: 00
SUB CODE: ME	NR REF SOV: 011	OTHER: 004

Card 3/3

ACCESSION NR: AT4036047 S/2781/63/000/003/0109/0117

AUTHORS: Brzhechko, M. V.; Vasil'yev, M. P.; Grigor'yeva, L. I.; Dolgopolov, V. V.; Loginov, A. S.; Pavlichenko, O. S.; Smerdov, B. I.; Stepanov, K. N.; Chechkin, V. V.

TITLE: Absorption of high-frequency energy by a plasma near ion cyclotron resonance, II.

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i problemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady* konferentsii, no. 3, Kiev, Izd-vo AN UkrSSR, 1963, 109-117

TOPIC TAGS: cyclotron resonance phenomena, plasma heating, plasma thermal excitation, plasma magnetic field interaction, microwave plasma, discharge plasma, plasma source

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ACCESSION NR: AT4036047

ABSTRACT: This is the second part of a two-part paper and is devoted to an experimental check on the absorption of high-frequency energy by a plasma under conditions of ion cyclotron resonance, and a check on the theoretical deductions of the first part of the paper. The system used to feed the high-frequency power into the plasma is an artificial LC line fed at a high harmonic. This system is claimed to have several advantages over others. The source of high-frequency power was a self oscillator specially developed for the excitation of the line. The plasma was produced by a pulsed Penning discharge in a magnetic field in hydrogen ($H \leq 0.8$ Tesla). Considerable loading of the generator by the plasma took place near ion cyclotron resonance, accompanied by an increased intensity of the glow of the H_β line in the discharge. The shift in the maxima of the load curve away from the resonant value of the magnetic field, and also the form of this curve, are in agreement with the results of the theoretical part of the paper. The system for the supply of the high-frequency energy to the plasma and the experimental setup

ACCESSION NR: AT4036047

are described in detail. It is pointed out that since the plasma temperature did not exceed 10^4 K in the experiments, the ion cyclotron damping is negligibly small and the absorption of high-frequency energy is only due to the collision between the ions and the electrons. The Penning discharge used in the investigation was not found to be as efficient as that elsewhere. The data offer evidence that the LC line is a highly effective system of transmitting high-frequency energy from the generator to a plasma in the case of ion cyclotron resonance. "The authors are grateful to K. D. Sinel'nikov and V. T. Tolok for a discussion of the work. Orig. art. has: 6 figures and 7 formulas.

ASSOCIATION: None

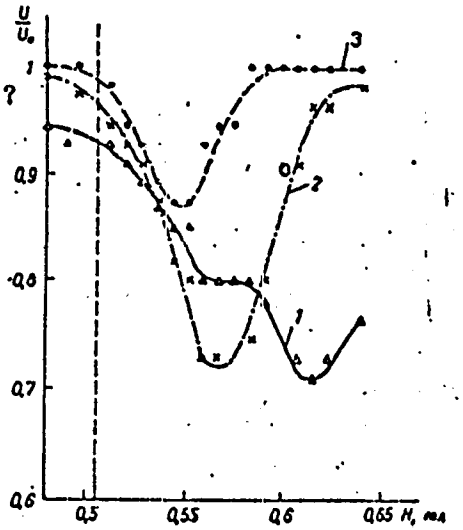
SUBMITTED: 00 DATE ACQ: 21May64 ENCL: 01

SUB CODE: ME NR REF SOV: 003 OTHER: 002

Card 3/4

ACCESSION NR: AT4036047

ENCLOSURE:01



Dependence of the amplitude of the high-frequency voltage on the line (in relative units) on the magnetic field intensity at differnt instants of time following the discharge ignition: 1 - 200 μsec, 2 - 300 μsec, 3 - 400 μsec.

Tesla

Card 4/4

DOLGOPOLOV, V.V.; STEPANOV, K.N.

Absorption of the energy of a high-frequency field by a plasma in the case of multiple ionic gyroresonance. Zhur. tekh. fiz. 33 no.10:1196-1199 O '63. (MIRA 16:11)

ACCESSION NR: AP4040207 S/0057/64/034/006/0974/0983

AUTHOR: Vasil'yev,M.P.; Grigor'yeva,L.I.; Dolgopolov,V.V.; Smerdov,B.I.; Stepanov, K.N.; Chechkin,V.V.

TITLE: On the absorption of high frequency energy by a plasma at frequencies near ion cyclotron resonance. 1.

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.6, 1964, 974-983

TOPIC TAGS: plasma, plasma heating, cyclotron resonance phenomena, electromagnetic wave absorption

ABSTRACT: The absorption of electromagnetic waves by a plasma at frequencies near the ion cyclotron resonance, discussed by T.H.Stix (Phys.Rev.106,1146,1957) as a means for heating a plasma, is treated theoretically for a cylindrical plasma filament of constant density. The high frequency electromagnetic field is assumed to be produced by traveling waves in a helical winding surrounding the plasma filament. The slight modifications required when the excitation is by standing waves in the helix are derived in an appendix. Damping both by ion collision and by cyclotron absorption, the process inverse to cyclotron radiation (magnetic bremsstrahlung),

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ACCESSION NR: AP4040297

are included in the treatment. A general expression for the energy flux is derived, and this is simplified and discussed in more detail for a number of limiting cases. The curve of absorption versus frequency is asymmetric, and the maximum absorption occurs at a frequency somewhat less than the Larmor frequency. The absorption of the slightly damped extraordinary wave is discussed. This can become important when the skin depth is too small to permit adequate penetration of the ordinary wave. The resonance, however, is very sharp, and it might be difficult to maintain adequate frequency control. Excitation of a plasma containing two ion species at the Larmor frequency of one of them produces a relative motion of the two ion species of the type discussed by S.J.Buchsbaum (Phys.Fl.3,418,1960) in connection with the low frequency hybrid resonance. "The authors express their deep gratitude to A.I. Akhiyezer and K.D.Sinel'nikov for valuable advice and discussions of the work."
Orig.art.has: 40 formulas and 2 figures.

ASSOCIATION: none

SUBMITTED: 15Mar63 DATE ACQ: 19Jun64 ENCL: 00

SUB CODE: ME NR REF SOV: 008 OTHER: 004

Card 2/2

ACCESSION NR: AP4040298 S/0057/64/034/006/0984/0992

AUTHOR: Vasil'yev,M.P.; Grigor'yeva,L.I.; Dolgopolov,V.V.; Smerdov,B.I.; Stepanov, K.N.; Chechkin,V.V.

TITLE: Experimental investigation of the absorption of high frequency energy by a plasma at frequencies near cyclotron resonance. 2.

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.6, 1964, 984-992

TOPIC TAGS: plasma, plasma heating, cyclotron resonance phenomena, electromagnetic wave absorption, hydrogen plasma

ABSTRACT: The absorption of high frequency energy by a hydrogen plasma at frequencies near the ion cyclotron resonance was investigated experimentally. The plasma was formed by discharge of a 6 microfarad capacitor, charged to 3 to 5 kV, between two cathodes at the ends of an 88 cm long 6 cm diameter discharge tube and an annular anode located 6 cm from one of the cathodes. The period of this system was 35 microsec. A longitudinal magnetic field up to 6.5 kOe was produced by discharge of a 0.006 farad capacitor bank through an appropriate solenoid. The period was 18 millisec, and the field could be considered constant during the 500 microsec observa-

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tion time. The magnetic field strength increased at the ends of the discharge tube, thus providing magnetic mirrors for confinement of the plasma. The high frequency electromagnetic field was produced by currents in a 7 cm diameter 7/8 cm pitch helix, coaxial with the discharge tube and loaded every 7 cm by a 450 micromicrofarad capacitor. This line was coupled to a pulsed self-excited oscillator operating at 7.5 megacycles/sec. The density of the plasma was determined with an 8.1 mm microwave interferometer. The electron temperature was determined from the intensity ratio of HeI 4921 to HeI 4713, 5% He having been added to the hydrogen to provide these lines. The ion temperature was determined from the Doppler broadening of Hβ. The power absorbed by the plasma was determined by measuring the power delivered by the oscillator to the helical line. The maximum power absorbed by the plasma in these experiments was 18 kW. During the flow of the discharge current, the ion temperature rose to several eV and the electron temperature to several tens of eV. The temperatures fell rapidly after the discharge ceased, and the electron temperature was less than 1 eV after 60 microsec. During about the first 100 microsec, when the plasma density was greater than 5×10^{13} cm^{-3}, a non-resonant absorption of high frequency energy was observed, the nature of which is not understood. The expected resonance absorption occurred after the density had fallen below 5×10^{13} cm^{-3}. The

resonance absorption was investigated and compared with the theory published by the present authors in the preceding paper (ZhTF 34,974,1964 [See Abstract AP4040297]). The conditions of the plasma were such that the absorption was entirely by collision The relation between plasma density and the shift of the absorption peak from the Larmor frequency was in good agreement with the theory. The width of the absorption band varied more rapidly with plasma density than the theory predicts. The energy balance in the plasma is discussed. The energy absorbed by the ions was rapidly transferred to the electrons and lost. It is concluded that significant heating can be achieved with the present method only by increasing the power or providing supplementary heating by the electrons. "The authors express their gratitude to V.T. Tolok, V.I.Konenko, O.S.Pavlichenko, V.A.Suprunenko and V.T.Pilipenko for assisting in the work and discussing the results." Orig.art.has: 8 formulas, 8 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 09May63 DATE ACQ: 19Jun64 ENCL: 00

SUB CODE: ME NR REF SOV: 007 OTHER: 003

Card 3/3

ACCESSION NR: AP4041998 S/0057/64/034/007/1231/1236

AUTHOR: Vasil'yev, M.P.; Grigor'yeva, L.I.; Dolgopolov, V.V.; Smerdov, B.I.; Stepanov, K.N.; Chechkin, V.V.

TITLE: On the cyclotron resonance in a nonuniform plasma cylinder

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.7, 1964, 1231-1236

TOPIC TAGS: plasma, nonuniform plasma, cyclotron resonance, plasma heating

ABSTRACT: The heating of a cylindrical plasma by resonance absorption at the ion Larmor frequency (T.H.Stix,Phys.Fl.1,308,1958) is discussed theoretically for the case when the plasma temperature and density may vary with distance from the axis. It is assumed that the external high frequency field is produced by travelling waves of current on a cylindrical surface coaxial with the plasma cylinder, and that the magnetic pressure in the plasma is large compared with the kinetic pressure. The thermal motion of the particles tranvservely to the magnetic field is neglected. Expressions for the power absorbed are derived by a perturbation method for the four cases when the plasma is either so hot that the effect of collisions may be neglected or so cold that the collisions are of overwhelming importance, and either the

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ACCESSION NR: AP4041998

density of the plasma is low or the radius of the plasma cylinder is small compared with the wavelength. The absorption curve of a low density plasma is shown to be symmetric about the cyclotron frequency, but the maximum absorption of a dense plasma filament is found to occur at a lower frequency. The theoretical absorption curves for a cold plasma are reported to be in good agreement with recent experimental data of the present authors (ZhTF 34,No.6,1964). If the density of a cold plasma filament is independent of distance from the axis, the absorption curve is symmetric about the displaced maximum. If, however, the plasma filament is not uniform, the absorption curve becomes asymmetric. The asymmetry of the absorption curves observed earlier by most of the present authors (V.V.Chechkin, M.P.Vasil'yev, L.I.Grigor'yeva and B.I.Smerdov,ZhTF 31,1033,1961) is ascribed to the nonuniform density of the plasma filaments. "In conclusion, the authors thank A.I.Akhezer for his interest in the work and for discussing the results." Orig.art.has: 36 formulas a 2 figures.

ASSOCIATION: none

SUBMITTED: 09May62 ENCL: 00

SUB CODE: ME NR REF SOV: 004 OTHER: 001

Card
2/2

DOLGOPOLOV, V.V.; YEFMAKOV, A.I.; NAZAROV, N.I.; STEPANOV, K.N.; TOLOK, V.T.

Experimental observation of Landau damping in a plasma. Zhur. eksp. i teor. fiz. 45 no.4:1260-1261 O '63. (MIRA 16:11)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

VASIL'YEV, M.P.; GRIGOR'YEVA, L.I.; DOLGOPOLOV, V.V.; SMERDOV, B.I.; STEPANOV, K.N.; CHECHKIN, V.V.

Absorption of high-frequency energy by a plasma near the frequency of ion cyclotron resonance. Pt.1. Zhur. tekh. fiz. 34 no.6:974-983 Je '64.

Experimental study of the absorption of high-frequency energy by a plasma near the frequency of ion cyclotron resonance. Part 2. Ibid.:984-992 (MIRA 17:9)

VASIL'YEV, M.P.; GRIGOR'YEVA, L.I.; DOLGOPOLOV, V.V.; SMERNOV, B.I.; STEPANOV, K.N.; CHECHKIN, V.V.

Cyclotron resonance in an inhomogeneous plasma cylinder.
Zhur. tekh. fiz. 34 no.7:1231-1236 Jl '64 (MIRA 17:8)

DOLGOPOLOV, V.V. [Dolhopolov, V.V.]

Thermal radiation from an inhomogeneous layer. Ukr. fiz. zhur. 9 no. 7:800-802 Jl '64. (MIRA 17:10)

1. Fiziko-tekhnicheskiy institut AN UkrSSR, Khar'kov.

L 03760-67 EWT(1) IJP(c) GG/GD/AT

ACC NR: AT6020569 (N) SOURCE CODE: UR/0000/65/000/000/0089/0098

AUTHOR: Dolgopolov, V. V.

ORG: none

TITLE: Characteristics of the electromagnetic field in a nonhomogeneous magnetoactive plasma

SOURCE: AN UkrSSR. Vysokochastotnyye svoystva plazmy (High frequency properties of plasma). Kiev, Naukovo dumka, 1965, 89-98

TOPIC TAGS: magnetoactive plasma, inhomogeneous plasma, isotropic plasma, electromagnetic field

ABSTRACT: The behavior of an electric field of a growing wave in a magnetoactive plasma is studied. With the aid of a permittivity tensor for an arbitrary angle between the direction of the wave and the magnetic field in the plasma, the electric field of the wave is computed using Maxwell equations. The solution is obtained assuming a harmonic form and expanding the resulting fields. In the extreme case of very long waves, the properties of growing waves are found to be the same as those in the isotropic plasma. The rate of the field growth is computed for some special cases. As in inhomogeneous plasma, the intensity of thermal radiation from the transparent plasma is comparable to black body intensity. This fact gives the inverse relation (for

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L 03760-67

ACC NR: AT6020569

the radiation absorption) for waves with wavelengths comparable to the distance between the plasma boundary and the point in the plasma when the largest growth occurs. This relation holds that no significant heating can occur in the case of laboratory plasmas when waves with microwave frequencies are used. Orig. art. has: 17 formulas.

SUB CODE: 20/ SUBM DATE: 19Nov65/ ORIG REF: 002

Card 2/2

L 07402-67 EWT(1) IJP(c) GD/AT

ACC NR: AT6020582 (N) SOURCE CODE: UR/0000/65/000/000/0186/0189

AUTHOR: Dolgopolov, V. V.; Pakhomov, V. I.; Stepanov, K. N. 73

ORG: none B+/

TITLE: On electron radiation in a plasma-magnetic field boundary layer

SOURCE: AN UkrSSR. Vysokochastotnyye svoystva plazmy (High frequency properties of plasma). Kiev, Naukovo dumka, 1965, 186-189

TOPIC TAGS: thermonuclear power, plasma magnetic field, electron radiation, boundary layer plasma, cyclotron frequency

ABSTRACT: The energy radiated by electrons in the region of a plasma near the plasma-magnetic field is calculated. The calculation is made for a low density plasma contained by a strong magnetic field such as in a thermonuclear reactor. The computation includes the effect of the anomalous skin thickness which differs from the case of dense plasma. When cyclotron radiation wavelength corresponds to stabilizing oscillation of the plasma and Doppler broadening (of the order of cyclotron frequency) is included, the intensity of the cyclotron radiation emitted by the plasma is given by the equation

$$I \sim I(\omega)\omega_B \sim \frac{\omega_B^3 v_e T}{4\pi^2 c^2} \sim \frac{e^2 n_0^{2/3} T^2}{c^4 m^{1/3}}.$$

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L 07402-67

ACC NR: AT6020582 O

When the plasma polarization is accounted for, the intensity of cyclotron radiation decreases by a ratio of electron rest mass energy to plasma temperature. It is also shown that cyclotron radiation is smaller (by the same ratio) than the bremsstrahlung radiation. These relations hold provided no generation of plasma waves occurs. Orig. art. has: 8 formulas.

SUB CODE: 20/ SUBM DATE: 19Nov65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 pla

L 23099-66 EWT(1)/EWG(f)/EPF(n)-2/EWG(m) IJP(c) AT

ACC NR: AP6007075 UR/0057/66/036/002/0273/0279

AUTHOR: Dolgopolov, V. V.

ORG: none

TITLE: Concerning the behavior of the electromagnetic field in an inhomogeneous magnetized plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v.36, no. 2, 1966, 273-279

TOPIC TAGS: nonuniform plasma, magnetoactive plasma, plasma electromagnetic wave, plasma heating, plasma resonance,

ABSTRACT: The author is concerned with the behavior of the field of a plane electromagnetic wave in an inhomogeneous plasma in the neighborhood of a surface on which the index of refraction becomes infinite. This problem has been previously discussed by N.G.Denisov (Radiotekhnika i elektronika, 1, 732, 1956) for the case of a plane wave incident normally on the surface of a plasma in a uniform magnetic field parallel to the surface. In the present paper this treatment is extended to the case of arbitrary incidence angle of the waves and arbitrary direction of the uniform magnetic field. The properties of the plasma are assumed to vary only in the direction normal to the surface. The dielectric tensor (assumed real - absorption is neglected) is expanded in a Taylor series about the singular surface on which certain of its components vanish as a result of the plasma resonance, and only the linear terms are re-

Card 1/2 UDC:533.9

L 23099-66
ACC NR: AP6007075

tained. Maxwell's equations are solved with the resulting approximate expression for the dielectric tensor and the solution so obtained is employed to match solutions on the two sides of and far from the singular surface, calculated in the geometric optics approximation. The two particular cases in which the magnetic field is a) parallel and b) perpendicular to the plasma surface are discussed in some detail. The effect of absorption is considered. It is found that the absorption is small for practical values of the plasma parameters, and it is concluded that the phenomena under discussion do not provide a useful mechanism for heating plasmas. The author thanks K.N. Stepanov for guiding the work. Orig. art. has: 37 formulas.

SUB CODE: 20 SUBM DATE: 09Nov64 ORIG. REF: 002 OTH REF: 000

Card 2/2 UDC

L 40999-66 EWT(1) IJP(c) GG/AT

ACC NR: AP6018723 SOURCE CODE: UR/0057/66/036/006/1003/1007

57
56
B

AUTHOR: Dolgopolov, V. V.; Stepanov, K. N.

ORG: none

TITLE: Resonance absorption of energy from low frequency oscillations by a cold nonuniform plasma

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 1003-1007

TOPIC TAGS: plasma electromagnetic wave, plasma heating, plasma magnetic field, longitudinal magnetic field, plasma resonance, NONUNIFORM PLASMA, RESONANCE ABSORPTION

ABSTRACT: The authors discuss the propagation in the axial direction of low frequency electromagnetic waves in a cold radially nonuniform plasma cylinder in a longitudinal magnetic field, with particular reference to the resonance region where the square of the refractive index is approximately equal to the r-r component (in cylindrical coordinates r, θ, z) of the dielectric tensor. The plasma is assumed to be dense (the Langmuir frequency high compared with the Larmor frequency) and the wave frequency is assumed to be low compared with the ion Larmor frequency. The plasma is described by the usual expression for the dielectric tensor in terms of the ion and electron Langmuir, Larmor, and collision frequencies. Different approximation techniques are employed to solve Maxwell's equations inside and outside the resonance region, and expressions are derived for the energy lost to the plasma by interaction of the plasma

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UDC: 533.9

L 40999-66

ACC NR: AP6018723

with the radial, azimuthal, and longitudinal components of the electric field of the wave. The case when the radius of the plasma cylinder is of the order of the wavelength is discussed in some detail. Depending on the relative magnitudes of the ion and electron collision frequencies and the wave frequency, the absorbed energy can either heat both the electron and ion components of the plasma, or only the electron component. The plasma electrons are heated by the longitudinal component of the electric field, and the ions, by the radial component. The proportionality of the power absorbed by the plasma to the square of the current in the exciting windings found by V.V.Chechkin et al. (Vysokochastotnyye svoystva plasmy. Sb. Kiyev, 1965) in their experiments on ion cyclotron resonance in a cold plasma is explained, and it is noted that the theoretical results of M.P.Vasil'yev et al. (ZhTF, 34, 974, 1231, 1964) for the case of purely Coulomb collisions when the wave frequency is close to the ion Larmor frequency are correct only in order of magnitude because under those conditions a certain approximation employed both by those authors and in the present paper is not valid. Orig. art. has: 18 formulas.

SUB CODE: 20 / SUBM DATE: 23Jul66 / ORIG. REF: 005 /

Card 2/2

DOLGOPOLOV, Ye., polkovnik

National liberation movement in its present stage. Komm. Vooruzh. Sil 4 no.2:82-87 Ja '64. (MIRA 17:9)

DOLGOPOLOV, Ye.V.

Improve the organization of capital assets accounting. Ugol' Ukr. 5 no.10:43 O '61. (MIRA 14:12)

1. Kiyevskiy institut narodnogo khozyaystva.
(Coal mines and mining--Accounting)

DOLGOPOLOV, Ye.V. [Dolhopolov, IE.V.]; GRISHCHENKO, A.O.[Hryshchenko, A.O.]

Business accounting in the production combines (firms) of the light industry. Leh. prom. no.4:33-36 O-D '64 (MIRA 18:1)

L 2759-65 EEC-4/EED-2/EEO-2/EWI(d)/EWI(1) Pn-4/Pab
ACCESSION NR: AP5002044 S/0142/64/007/005/0630/0633

25
B

AUTHOR: Dolgopolov, Ya. A.

TITLE: Noise immunity of a receiver which forms a set of readings of the autocorrelation function

SOURCE: IVUZ. Radiotekhnika, v. 7, no. 5, 1964, 630-633

TOPIC TAGS: autocorrelation reception, radio reception, noise immunity

ABSTRACT: A formula (10) is developed which shows that, with a simple (n = 1) autocorrelation receiver, the maximum gain in noise immunity as compared to a filter-square-law-detector-integrator system is $\sqrt{2}$. The formula permits determining the required number of channels and the required passband in order to ensure a specified noise-immunity gain. Orig. art. has: 1 figure and 17 formulas.

ASSOCIATION: none

SUBMITTED: 08Oct63 ENCL: 00

SUB CODE: EC NO REF SOV: 002 OTHER: 000

Card 1/1

[redacted], Yu.A.

Interference rejection of a receiver forming [illegible] of an autocorrelation function. Izv.vys.uchab.zav.; radiotekh. 7 no.4: 630-633 S-O '64. (MIRA 18:4)

DOLGOPOLOVA, A.; GRIGOR'YEV, Yu., yurist

Our consultations. Sov.profsoiuzy 18 no.14:44-45 Jl '62.
(MIRA 15:7)

1. Zaveduyushchaya otdelom truda i zarabotnoy platy TSentral'nogo komiteta profsoyuza rabochikh pishchevoy promyshlennosti (for Dolgopolova).
(Wages--Fisheries) (Sanatoriums) (Sick leave)

DOLGOPOLOVA, A.M.,

Cystic form of sarcoma of the pancreas. Khirurgiia, Moskva no. 5: 83-85 My '55. (MLRA 8:9)

1. Iz 1-y gorodskoy klinicheskoy bol'nitsy (glavnyy vrach P.M. Filippenko) Saratova.

(PANCREAS, neoplasms
sarcoma, pathol. & progn.)
(SARCOMA
pancreas, pathol. & progn.)

DOLGOPOLOVA, A.M.

Primary suture in gunshot wounds of the lungs. Voen.-med. zhur no.6: 25-27 Je '58. (MIRA 12:7)
(LUNGS, wds. & inj.
gunshot wds., primary suture in repair (Rus))

S/137/62/000/002/002/008
A006/A101

AUTHORS: Fedorov, P. I., Shachnev, V. I., Dolgopolova, A. M.

TITLE: Phase diagram of the lead-bismuth-magnesium system

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 2, 1962, 58-64

TEXT: The authors studied the phase diagram of Pb-Bi-Mg system by the method of thermal analysis. On the whole, 8 sections were investigated in the given ternary system. The results obtained are illustrated by a number of graphs which show that sections $Pb-Mg_2-Bi_2Mg_3$ and $Pb-Bi_2Mg_3$ are binary ones and that the given ternary system is divided into three separate ternary systems, namely: $Pb-Bi-Bi_2Mg_3$; $Pb-PbMg_2-Bi_2Mg_3$ and $PbMg_2-Mg-Bi_2Mg_3$. In section $PbMg_2-Bi_2Mg_3$ the formation of a ternary phase was observed, which decomposed at 520°C by peritectic reaction ⑭ ⇄ liq$_{solut.}$ + ①. There are 11 figures and 3 references: 1Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATIONS: Moskovskiy institut tonkoy khimicheskoy tekhnologii (Moscow Institute of Fine Chemical Technology); Kafedry khimii i

Card 1/2

S/137/62/000/002/002/008
A006/A101

Phase diagram of the lead-bismuth-magnesium system

tekhnologii redkikh i rasseyannykh elementov (Department of Chemistry and Technology of Rare and Dispersed Elements)

SUBMITTED: November 29, 1961

Card 2/2

DOLGOPOLOV, N.

[redacted]

In memory of N.I.Dolgopolov, on the 100th anniversary of his birth.
[illegible] no.6:136-137 Je '58. (MLRA 10:9)

1. Meditsinskiy chlen AN SSSR (for Speranskiy)
(DOLGOPOLOV, NIKOLAY IVANOVICH, 1858-1922)

DOLGOPOLOVA, Anna Sergeyevna; SHAKHMAGON, Andrey Iosifovich; MEDVEDEVA, L.V., red.; KORCBOVA, N.D., tekhn. red.

[Wages in enterprises of the food and fish industry] Oplata truda na predpriiatiiakh pishchevoi i rybnoi promyshlennosti. Moskva, Profizdat, 1963, 287 p. (MIRA 16:7)

(Wages—Food industry) (Wages--Fisheries)

ACCESSION NR: AP4020973 S/0051/64/016/003/0538/0539

AUTHOR: Skorobogatov,B.S.; Sazonova,S.A.; Dolgopolova,A.V.; Kovaleva,L.V.

TITLE: Luminescence of trivalent samarium in NaCl and KCl crystals

SOURCE: Optika i spektroskopiya, v.16, no.3, 1964, 538-539

TOPIC TAGS: sodium chloride host, potassium chloride host, rare earth activator, laser material, samarium ion, samarium 3+

ABSTRACT: The study is one of a series devoted to investigation of the luminescence of trivalent rare earth ions in NaCl and KCl single crystals, grown by the authors. This paper describes the results obtained for trivalent samrium in NaCl and KCl. The luminescence spectra of Sm^{3+} in NaCl were recorded at 77, 300 and 450°K (the spectrograms are reproduced). Three characteristic line groups are observed at all three temperatures; the most intense lines are probably associated with transitions from the lowest radiative level to the levels of the ground state multiplet. Fine structure is evinced at all the above temperatures, but at 77°K the spectrum is simplified and the lines become much narrower. The above mentioned spectra are compared with the spectrum of Sm^{3+} in CaF_2. The spectra are similar, but some of the

Card 1/2

ACCESSION NR: AP4020973

lines evinced in the spectrum of Sm^{3+} in CaF_2 at 300°K appear in the spectrum in NaCl only at 450°. In the spectrum of Sm^{3+} in KCl at 300°K (the only one shown) only three lines are observed; these agree in frequency with the principal lines in the spectrum of Sm^{3+} in NaCl; this would indicate that in view of the difference in ionic radii the Sm^{3+} ion is less readily incorporated into the KCl lattice as compared with the NaCl lattice. The reproduced luminescence spectra were recorded by means of an ISP-51 spectrograph with an f = 270 mm camera on Agfa-640 film. The luminescence was excited by filtered radiation from a mercury discharge tube. "The authors are grateful to P.P.Feofilov for his interest in the work and for making available the CaF_2-Sm^{3+} crystal." Orig.art.has: 2 figures.

ASSOCIATION: none

SUBMITTED: 24Jun63

DATE ACQ: 02Apr64

ENCL: 00

SUB CODE: PH

NR REF SOV: 000

OTHER: 003

Card 2/2

ACCESSION NR: AP4042993 S/0051/64/017/001/0141/0143

AUTHORS: Dolgopolova, A. V.; Kovaleva, L. V.; Sazonova, S. A.; Skoroboqatov, B. S.

TITLE: On the luminescence of rare earth ions in NaCl crystals

SOURCE: Optika i spektroskopiya, v. 17, no. 1, 1964, 141-143

TOPIC TAGS: luminescence, sodium chloride, rare earth element, praseodymium, terbium, ytterbium, gadolinium, neodymium

ABSTRACT: Continuing earlier research on NaCl crystals activated with trivalent samarium ions (Opt. i spektr. No. 3, 538, 1964), the authors report the luminescence of Pr^{3+}, Tb^{3+}, Gd^{3+}, Nd^{3+}, and Yb^{2+} in NaCl crystals, and present the luminescence spectra for Pr^{3+} and Tb^{3+} at room and low temperatures, and the absorption spectra of Yb^{2+} in NaCl, KCl, and KBr. Some of the possible level transitions responsible for the most pronounced lines are indicated.

1/2

ACCESSION NR: AP4042993

Comparisons are made with results by others. Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 16Aug63 ENCL: 00

SUB CODE: OP, IC NR REF SOV: 005 OTHER: 002

2/2

DOLGOPOLOVA, A.V.

Pulmonary modifications and respiration in acute phase of dysentery in children. Pediatriia, Moskva No.6:26-30 Nov-Dec 51. (CIML 21:4)

1. Of the Children's Clinic, Moscow Medical Institute of the Ministry of Public Health RSFSR (Head of Clinic--Prof. A.I. Dobrokhotova) attached to the Children's Hospital imeni Rusakov (Head Physician--Docent V.A. Krushkov).

DOLGOPOLOVA, A.V.; LEBEDEV, D.D., professor, nauchnyy rukovoditel'; PROKHOROVICH, Ye.V., zaslushennyy vrach respubliki, glavnyy vrach.

Clinical aspects of chronic tonsillitis in children. Pediatriia no.4:15-18 Jl-Ag '53. (MLRA 6:9)

1. Klinika fakul'tetskoy pediatrii pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta im. I.V.Stalina (for Dolgopolova). 2. Vtoroy Moskovskiy meditsinskiy institut imeni I.V.Stalina (for Lebedev). 3. Ob'yedinennaya detskaya klinicheskaya bol'nitsa (for Prokhorivich). (Tonsils--Diseases)

ДОЛГОПОЛОВА А.В.

AIVAZOV, A.S.; DOLGOPOLOVA, A.V.; LYALINA, N.A.; PAPADICHEVA, Z.B.

Treatment of chronic tonsillitis in children. Pediatriia no.1: 7-12 Ja-F '54. (MLRA 7:3)

1. Iz kliniki fakul'tetskoy pediatrii pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta im. I.V.Stalina (nauchnyy rukovoditel' - professor D.D.Lebedev) i poliklinicheskogo otdeleniya 1-y Klinicheskoy detskoy bol'nitsy Moskvy (glavnyy vrach - zasluzhennyy vrach respubliki Ye.V.Prokhorovich).
(Tonsils--Diseases)

DOLGOPOLOVA, A. V. Doc Med Sci -- (diss) "Materials concerning clinic [clinical treatment] and treatment of chronic tonsillitis in children." Mos, 1958. 21 pp. (2nd Mos State Med Inst im N.I. Pirogov). 200 copies.

(KL, 8-58, 107)

Data for

DOLGOPOLOVA, A. V.

EXCERPTA MEDICA Sec 7 Vol 13/7 Pediatrics July 59

1603. CHRONIC TONSILLITIS IN CHILDREN OF THE PRE-SCHOOL AGE (Russian text) - Dolgopolova A. V. and Lyalina N. A. - PEDIATRIYA 1958, 3 (11-16) Graphs 3 Tables 1

In examining 800 children aged from 3 to 7 yr., the authors revealed 52 children affected with chronic tonsillitis (6.5%). Most of them had complaints indicating the presence of general intoxication: a poor appetite and a disturbed sleep, irritability, tearfulness, headache, periodical pain in the joints and muscles, an occasional subfebrile temperature. Cardiac changes were present in 50 children - systolic murmur, decreased functional ability. The studies performed emphasize the necessity of introducing periodical examination of children for the detection and treatment of chronic tonsillitis. (XI, 7)

dlz kapitny detskikh inspektsiy II Moscow Med. Inst.
i poliklinicheskogo otdeleniya 1-y Moskovskoy
klinicheskoy detskoy bol'nitsy.

DOLGOPOLOVA, A.V., dots. (Blagoveshchensk-na-Amure)

Abdominal pain as a symptom in certain diseases of children. Fel'd. i akush. 23 no.4:17-21 Ap '58. (MIRA 11:4)
(ABDOMEN--DISEASES) (CHILDREN--DISEASES)

DOLGOPOLOVA, A.V.; ANDREYEVA, T.S.

X-ray therapy in chronic tonsillitis in children. Vest.rent. i rad. 33 no.2:81-82 Mr-Ap '58. (MIRA 11:6)

1. Iz kozhnogo otdeleniya (zav. - kandidat meditsinskikh nauk P.S. Ivanov; konsul'tant - dotsent S.M.Gitman) i iz rentgenovskogo otdeleniya (zav. P.S.Murogin; konsul'tant - prof. N.P.Negovskiy) TSentral'noy poliklinik Ministerstva putey soobshcheniya SSSR (nach. N.I.Kuznetsov)

(TONSILLITIS, ther.
x-ray ther. in chronic dis. (Rus))
(RADIOTHERAPY, in various dis.
x-ray ther. in chronic tonsillitis (Rus))

DOLGOPOLOVA, A.V.

"Problems in pedintric cardiology." Pediatriia 36 no.6:93-94 Je '58 (MIRA 11:6)

(HEART)

DOLGOPOLOVA, A.

"Cardiological problems of childhood." Pediatriia, Moskva 36 no.8: 89-91 Ag '58. (MIRA 12:1)
(HEART--DISEASES) (CHILDREN--DISEASES)

DOLGOPOLOVA, A.V.

Immunophagocytic reactions of the blood and of the tonsils in chronic tonsillitis in children. Zhur.mikrobiol.epid. i immun. 30 no.5:66-71 My '59. (MIRA 12:9)

1. Iz II Moskovskogo gosudarstvennogo meditsinskogo instituta i 1-y Klinicheskoy detskoy bol'nitsy.
(TONSILLITIS, immunol.
blood & tonsils phagocytic reactions (Rus))
(PHAGOCYTOSIS, in var. dis.
tonsillitis in child. (Rus))

DOLGOPOLOVA, A.V.

Cytogram of the tonsils in children with chronic tonsillitis. Pediatriia 37 no.4:64-67 Ap '59. (MIRA 12:6)

1. Iz kafedry fakul'tetskoy pediatrii (zav. - prof.P.A.Ponomareva) II Moskovskogo meditsinskogo instituta na baze 1-y klinicheskoy detskoy bol'nitsy Moskvy (glavnyy vrach - zasluzhennyy vrach RSFSR Ye.V.Prokhorovich).

(TONSILLITIS
chronic, eff. on local phagocytic activity of leukocytes (Rus))
(PHAGOCYTOSIS
eff. of chronic tonsillitis on local phagocytic activity of leukocytes (Rus))

DOLGOPOLOVA, A.

"Rheumatic fever in children" by O.D. Sokolova-Ponomareva. Reviewed by A. Dolgopolova. Pediatriia 37 no.5:91 My '59. (MIRA 12:8)
(RHEUMATIC FEVER)(SOKOLOVA-PONOMAREVA, O.D.)

DOLGOPOLOVA, A.V.; KUZ'MINA, N.N.; BATYUNINA, N.F.

Effectiveness of various methods of treatment for children with active rheumatic fever. Vop.revm. 1 no.2:25-33 Ap-Je '61. (MIRA 16:4)

1. Iz detskogo klinicheskogo otdeleniya Gosudarstvennogo nauchno-issledovatel'skogo instituta revmatizma (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.Nesterov, nauchnyy konsul'tant - prof. D.D.Lebedev) Ministerstva zdravookhraneniya RSFSR.
(CHILDREN--DISEASES) (RHEUMATIC FEVER)

DOLGOPOLOVA, A.V.; KUZ'MINA, N.N.

Triamcinolone in the treatment of rheumatic fever in children; preliminary report. Vop. okh. mat. i det. 6 no.5:18-24 My '61.
(MIRA 14:10)

1. Iz detskogo klinicheskogo otdeleniya Nauchno-issledovatel'skogo instituta revmatizma (direktor - deystvitel'nyy chlen AMN SSSR zasluzhennyy deyatel' nauki prof. A.I.Nesterov) Ministerstva zdravookhraneniya RSFSR na baze 67-y Gorodskoy klinicheskoy bol'nitsy (glavnyy vrach L.V.Petropol'skaya).
(TRIAMCINOLONE) (RHEUMATIC FEVER)

DOLGOPOLOVA, A.V.; KUZ'MINA, N.N.; BATYUNINA, N.F.

Hormonal and medical treatment of children during the active phase of rheumatic fever. Pediatriia 39 no.2:48-55 F '61. (MIRA 14:2)

1. Iz detskogo klinicheskogo otdeleniya Gosudarstvennogo nauchno-issledovatel'skogo instituta revmatizma (dir. - deystvitel'nyy chlen AMN SSSR zasluzhennyy deyatel' nauki prof. A.I. Nesterov) na baze 67-y gorodskoy klinicheskoy bol'nitsy (glavnyy vrach L.V. Petropol'skaya).

(RHEUMATIC FEVER) (PREGNADIENEDIONE)

L 43575-65 EWG(j)/EWT(l)/EWT(m)/EWP(e)/EPF(c)/EWP(i)/EPR/T/EEC(b)-2/EWP(b)
Pr-4/Ps-4/Pi-4 IJP(c) WW/GG/WH
ACCESSION NR: AT5009560 S/0000/62/000/000/0021/0024

AUTHOR: Bakradze, R. V.; Dolgopolova, A. V.; Kraynyukov, N. I.; Sysoyev, L. A.

TITLE: Crystallization of compounds of the type A(II) B(VI)

SOURCE: Konferentsiya o monokristallakh. 4th, Tarnov, 1961. Sbornik referatov. Turnov, VUM, 1962, 21-24

TOPIC TAGS: single crystal cultivation, cadmium sulfide crystal, cadmium selenide crystal, sublimation, directed solidification, dislocation density, crystal electrical conductivity, crystal photosensitivity

ABSTRACT: After reviewing the methods of preparation of single crystals of $A^{II}B^{VI}$ compounds reported in the literature, the authors describe the techniques they employed in growing single crystals of cadmium sulfide by sublimation and single crystals of cadmium sulfide and selenide from melts. The cadmium sulfide crystals were grown at 800-1150C in a quartz tube; they were in the form of hexagonal prisms (800-1150C) and rectangular plates (850-950C). The cadmium sulfide and selenide crystals were grown in a graphite container at 1800C and under 200 atm of argon, directed solidification being used; cylindrical ingots were thus obtained. The dislocation density of cadmium sulfide

Card 1/2

L 43575-65
ACCESSION NR: AT5009589

was found to be 10^5 cm^{-2}. The electrical conductivity and photosensitivity of all three types of crystals were measured. Orig. art. has: 9 figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov Khar'kov (All-Union Scientific Research Institute of Single Crystals)

SUBMITTED: 00 ENCL: 00 SUB CODE: SS

NO REF SOV: 004 OTHER: 013

Card 2/2

DOLGOPOLOVA, A.V., doktor med. nauk (Moskva)

Planning and coordination of research on rheumatic fever in children. Vop. revm. 2 no.4 87-88 (MIRA 17:4)

DOLGOPOLOVA, A.V.

"Rheumatic fever in children" by B.I.Gurvich. Reviewed by A.V. Dolgopolova. Biul. Uch.med. sov. 3 no.2:41-42 Mr-Ap '62. (MIRA 15:4)

(RHEUMATIC FEVER) (CHILDREN—DISEASES)
(GURVICH, B.I.)

DOLGOPOLOVA, A. V.; KUZ'MINA, N. N.

Treatment of children during the active phase of rheumatism with dexamethasone (Preliminary report). Pediatriia 41 no.3:39-44 '62. (MIRA 15:2)

1. Iz detskogo klinicheskogo otdeleniya Gosudarstvennogo nauchno-issledovatel'skogo instituta revmatizma (dir. - deystvitel'nyy chlen AMN SSSR, zasluzhennyy deyatel' nauki prof. A. I. Nesterov)

(PREDNISONE) (RHEUMATIC FEVER)

DOLGOPOLOVA, A.V., prof.; KUZ'MINA, N.N.; BATYUNINA, N.F.

Catamnesis of children who recieved hormone and drug therapy during an acute attack of rheumatism. Vop.revm. 3 no.1:31-36 Ja-Mr '63. (MIRA 16:4)

1. Iz detskogo klinicheskogo otdeleniya Instituta revmatizma (dir. - deystvitel'nyy chlen AMN SSSR prof. A.I.Nesterov; nauchnyy konsul'tant - prof. D.D.Lobedev) AMN SSSR.
(PHARMACOLOGY) (RHEUMATIC HEART DISEASE)